

TOSHIBA**MICROWAVE SEMICONDUCTOR**
TECHNICAL DATA**MICROWAVE POWER GaAs FET**
TIM4450-60SL**FEATURES****■ LOW INTERMODULATION DISTORTION**

IM3=-45 dBc at Pout= 36.5dBm

Single Carrier Level

■ HIGH POWER

P1dB=48.0dBm at 4.4GHz to 5.0GHz

■ HIGH GAIN

G1dB=9.5dB at 4.4GHz to 5.0GHz

■ BROAD BAND INTERNALLY MATCHED**■ HERMETICALLY SEALED PACKAGE****RF PERFORMANCE SPECIFICATIONS (Ta= 25° C)**

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Output Power at 1dB Compression Point	P1dB	VDS= 10V f = 4.4 to 5.0GHz IDSset=9.5A	dBm	47.0	48.0	—
Power Gain at 1dB Compression Point	G1dB		dB	8.5	9.5	----
Drain Current	IDS1		A	—	13.2	15.0
Gain Flatness	ΔG		dB	—	—	±0.8
Power Added Efficiency	ηadd		%	—	41	—
3rd Order Intermodulation Distortion	IM3	Two Tone Test Po=36.5dBm	dBc	-42	-45	—
Drain Current	IDS2	(Single Carrier Level)	A	----	13.2	15.0
Channel Temperature Rise	ΔTch	VDS X IDS X Rth(c-c)	°C	—	—	90

Recommended Gate Resistance(Rg) : 28 Ω (Max.)

ELECTRICAL CHARACTERISTICS (Ta= 25° C)

CHARACTERISTICS	SYMBOL	CONDITION	UNIT	MIN.	TYP.	MAX.
Transconductance	gm	VDS= 3V IDS= 12.0A	S	—	20	—
Pinch-off Voltage	VGSoff	VDS= 3V IDS= 200mA	V	-1.0	-1.8	-3.0
Saturated Drain Current	IDSS	VDS= 3V VGS= 0V	A	—	38	46
Gate-Source Breakdown Voltage	VGS0	IGS= -1.0mA	V	-5	—	—
Thermal Resistance	Rth(c-c)	Channel to Case	°C/W	—	0.6	0.8

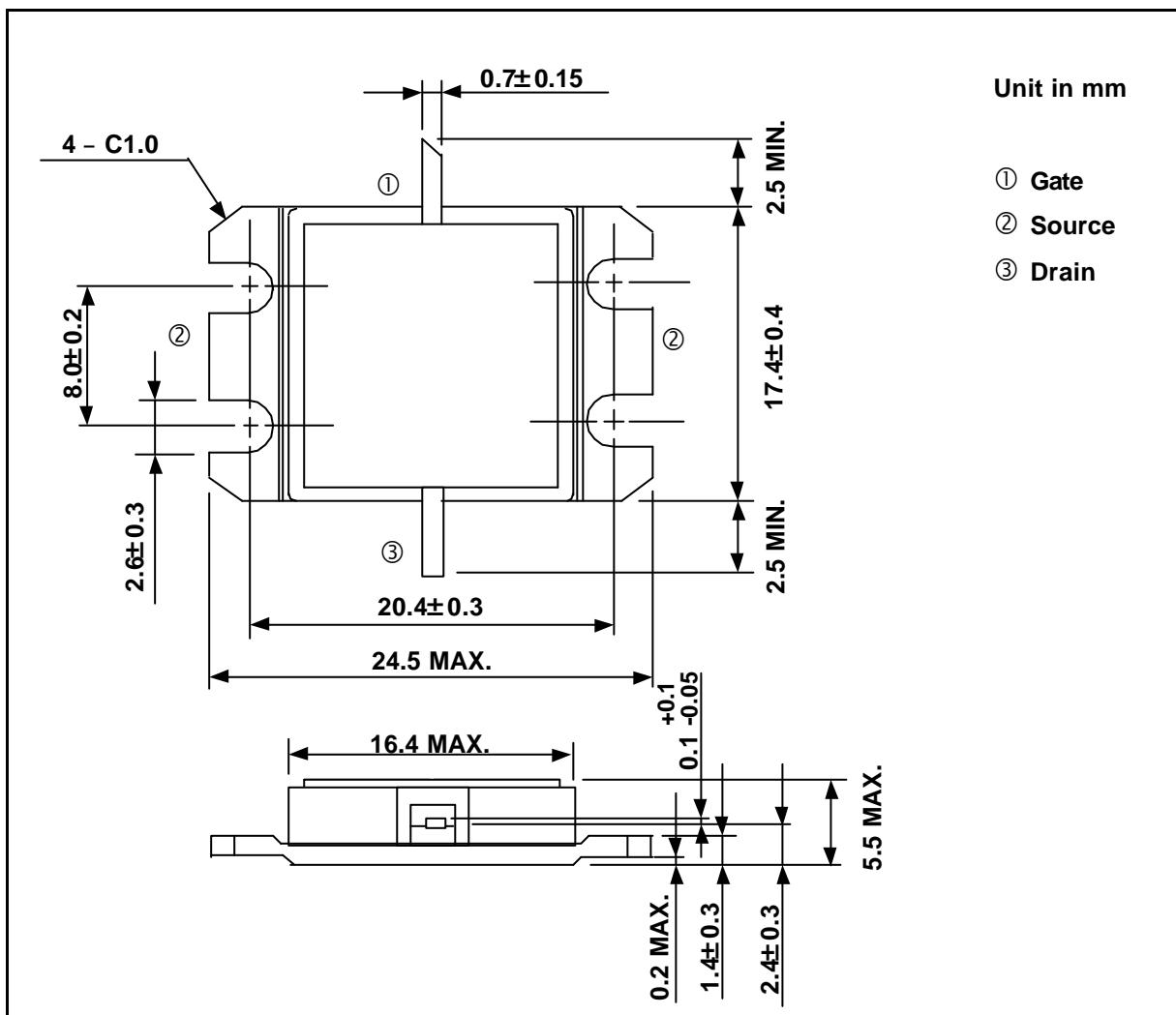
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The information contained herein is subject to change without prior notice. It is therefore advisable to contact TOSHIBA before proceeding with design of equipment incorporating this product.

ABSOLUTE MAXIMUM RATINGS (Ta= 25° C)

CHARACTERISTICS	SYMBOL	UNIT	RATING
Drain-Source Voltage	V _{DS}	V	15
Gate-Source Voltage	V _{GS}	V	-5
Drain Current	I _{DS}	A	26
Total Power Dissipation (T _c = 25 °C)	P _T	W	215
Channel Temperature	T _{ch}	°C	175
Storage Temperature	T _{stg}	°C	-65 to +175

PACKAGE OUTLINE (2-16G1B)

HANDLING PRECAUTIONS FOR PACKAGED TYPE

Soldering iron should be grounded and the operating time should not exceed 10 seconds at 260°C.